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ABSTRACT

Three goals have been set for San Joaquin Delta College Learning Resource Center's cable distribution system: it is to be made useable, useful, and flexible. Presently the system consists of a microwave dish installed on one building which points to a relay station with approximately one and one half miles of cable pulled to various locations. A limited number of classroom drops are now capable of receiving a telecast on the system; however, none of the programs available for showing are suitable for use with the student body. In order to accomplish its goals for the cable system, the Learning Resource Center has established nine objectives: (1) install an antenna, switchers, mixers, and other necessary equipment to bring in commercial and public broadcasting stations; (2) connect the library to the cable system; (3) establish a center for scheduling, recording, storing, and distributing videotapes and 16mm films for closed circuit distribution; (4) provide closed circuit distribution capability for videotaped programs; (5) establish a videotape and 16mm film library; (6) connect an adequate number of classrooms to the cable system; (7) install receiver/monitors in each classroom selected for hookup; (8) provide adequate maintenance of the whole system; and (9) provide the capability for eventual two-way transmission. (LLS)

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AN ANALYSIS OF OUR CABLE DISTRIBUTION SYSTEM: ITS CURRENT AND FUTURE CAPABILITIES

by

Tobin deLeon Clarke

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Learning Resources
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AN ANALYSIS OF OUR CABLE DISTRIBUTION SYSTEM:

ITS CURRENT AND FUTURE CAPABILITIES

I've begun my analysis of Learning Resource functions with our cable system because it seems a logical place to start as it is only partially installed and not operational. My goals in this effort are to make what we have (1) useable, (2) useful and (3) flexible. In order to do this the following objectives will need to be met:

1. Install an antenna, switchers, mixers and other necessary equipment to bring in all commercial and public broadcasting stations received in this area.

2. Connect the Goleman Library building to the cable.

3. Establish in Goleman Library building a center for scheduling, recording, storing and distributing videotapes and 16mm films for closed circuit distribution.

4. To provide closed circuit distribution capability for videotaped commercial programs and films, college produced tapes, programs recorded off the air and 16mm films, in addition to regular commercial and public television.

5. To eventually establish a large videotape and 16mm film library.

6. Connect an adequate number of classrooms to the cable which is already installed in each center and the Forum building.

7. Install receiver/monitors in each classroom selected for cable hookup.

8. Provide adequate maintenance of receiver/monitors as well as the whole system to insure dependability.

9. To provide the capability for eventual two-way transmission.

At the present time our cable system consists of a microwave dish on Budd Center pointing to a relay station called Brushy Peak, and approximately one and one-half mile of cable pulled to all centers and the Forum. A very limited number of classroom drops are now capable of receiving a telecast on this system. Ironically, even if we installed monitors at each cable hookup available now we would not find any telecasts transmitted to be of use to us. The system was designed to pick up signals from U. C. Davis. Davis transmits their own television classes which are broadcast for students enrolled in U. C. Davis courses. Since these are only suitable for upper-division students, what we have now is neither useful to our students nor useable by our faculty. In other words we have a partial system which we can't use.

In order to correct this situation we will need to install an additional antenna on Budd Center plus additional amplifiers and filters and other electronic equipment necessary to bring into selected classrooms and Goleman Library all commercial and public broadcasting stations received in this area.

This will allow us to receive a wide variety of programs as they are being transmitted. We cannot do this now because the construction of the centers acts as a radio frequency shield obstructing adequate reception. It will also allow us to pick up and record telecasts in Goleman for use at a later time. (There are copyright problems in this area, but we do take this into account. Also, certain PBS programs

carry automatic authorization to be copied and held for five days.)

In order to gain maximum flexible use of our system we will also need to provide for closed circuit distribution over our cable of videotaped commercial programs and films, college produced tapes, programs recorded off the air and 16mm films. This can be done by establishing in Goleman Library building a center for scheduling, recording, storing and distributing videotapes and 16mm films to classrooms and other facilities provided with drops for receiver/monitors installations. It is also possible to provide for on demand access to this service.

To accomplish this optimally we will need a large resource library of videotapes and 16mm films, an on going process as well as a long range goal,a number of signal reproduction machines (VTRs and 16mm telecine chains),a wide-band multichannel video distribution system, and if we decide to provide for on demand access, a narrow-band program request system between the user and the point of program origination. The on demand access feature may or may not be feasible or desirable on a wholesale basis, i.e., a telephone or data channel access at every point of reception, but a modified plan might do the job for us just as well. For instance, calling in requests to the scheduling center from faculty offices at a reasonable time prior to need would probably work as well.

All receiver/monitors on the system should be able to pick up any program being transmitted which seems the most practical and con-

venient for the size and relative homogeneous nature of our institution, i.e., a single campus, two-year college rather than a multi-campus or K-12 multi-school district situation. In other words, all centers should be able to pick up any program being telecast on any one of the available channels. No one channel will be limited to use by one center.

A prerequisite to the use of this system is to connect an adequate number of classrooms, labs, libraries and other campus facilities to the cable system so that as many faculty and students as possible will have access to the system both in groups and individually. Group use will be provided for in classrooms, etc., and individual use in Goleman Library and the center libraries. This obviously also would mean supplying each of these locations with receiver/monitors and also means a committment to properly maintaining the receiver/monitors as well as the whole system so that reliability is insured.

The installation of this distribution center will virtually eliminate the need for the antiquated method we now use to get TV monitors and players into classrooms - pushing hand trucks with the equipment across campus over rough walkways, which damages the equipment and causes additional maintenance and faculty dissatisfaction with performance.

Also, since our supply of video players is limited we would eliminate frustration over availability and conflict over use. It should be noted, however, that we will still need some portable video

units which can be controlled in the classroom as this will be called for in certain situations. The Beta-Max units would be ideal for this since they are small and inexpensive

Through this distribution center, also, off the air recording will be scheduled and accomplished in a centralized location, thereby providing for better organization, control and flexibility.

While recording being done now at the radio station is adequate, the service provided is not as good as it should be, not because the staff is not willing, but because their time is limited. They have too many responsibilities and off-air recording of TV programs is a stepsister. This has resulted in missed programs, partially missed programs, poorly recorded programs and lack of coordination. Also, because there is only one TV set and recorder unit set up in the station the flexibility of recording a variety of programs for use at a more convenient time is limited to say the least.

Even though we might not have course offerings which will require this capability or even plans that would call for the necessity of such a feature we should provide for two way transmission capabilities within the system. Franchised cable systems are required to have this capability since it is felt that this is a reasonable potential for cable use. Possible uses would be: increased communication on campus, immediate responses to surveys presented on closed circuit TV, and in the eventuality that we offer TV courses on campus or off campus, if instructors are present or we are connected to a computer questions could be asked and answered at the same time.

In order to meet the goal of providing Delta developed classes on videotape for use throughout the district on local stations, we will need our own studio, producer, director and engineer. This is a long range goal and is only possible if the Performing Arts Division developes a program which will lend itself to such production.

However, we do have a couple of alternatives which can be used in lieu of our own productions. We can purchase and/or rent software courses or programs which we can distribute to local stations to be telecast in areas outside of Stockton. Also, we can modify our present system, hopefully using some of the microwave equipment we now have, so that we will be able to transmit to Big Valley any type of program originating at Delta (sports, plays, program, etc.,) this can then be broadcast to a wider audience on one of their channels. Since cable franchisers need to provide an educational channel it would seem likely that they would be happy to take advantage of this type of arrangement. We would need to be licensed to broadcast though.

Once the antenna is installed and the cable pulled we will have a working system which we can operate with present staff. This will make available channels 3, 7, 9, 10, 13 and the microwave channel. We can then add the closed circuit distribution facility, but it is more economical to do all the work at the same time. This will add five additional channels for closed circuit distribution of videocassettes and 16mm film and eventually, live programming as well.

We will need additional help to handle the distribution system and the scheduling of programs. Students working under the supervision of the day and evening staff should be able to absorb the additional workload. This would mean a time card budget increase to cover at least a 15 hour day, five days a week.

Basically, the system as proposed should do much to increase the use of TV on campus because of its convenience and dependability. It should also stimulate the desire to produce programs and encourage creative thinking for innovative use in the classroom. Also in-house communication of information between faculty, management and other staff will be stimulated and expedited if the potential of closed circuit distribution is fully tapped. And most of this can be accomplished in a reasonably short period of time for a relatively reasonable cost. The faculty is making more and more use of our video equipment. Should this use be encouraged to grow by providing the flexible dependable service as proposed, or should we opt for the status quo and continue to provide the service now offered?

The question that needs to be answered is, is the district willing to make the committment to develop the system and maintain it?

This plan has been discussed with Don Gilbeau of Delta Sound and Radio, the company which installed our present rudimentary system, and quotes have been given for most of the necessary modifications. They are presented with this report.

Tobin Clarke
Director of Learning Resources

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Addendum

The division chairpersons have been asked to indicate to me, classrooms and other areas in which the faculty would like to have cable hookups and monitor/receivers. So far ten divisions have responded with requests for forty-four drops in the various centers. The following is a list of rooms by center.

Budd	Cunningham	Holt	Locke	Shima
117	101	313	108	116
207	102	401	109	134
210	103	417	118	142
333	108	421	228	143
	112		302	144
	114			151
	115			214
	119			215
	212			236
	214			241
	216			402
	218			
	311			
	312			
	411			
	435			